Attachment B - **Salt Marsh Species/Habitat Restoration**

1. Habitat restoration in Suisun Marsh would benefit a wide range of species targeted by the Conservation Strategy, including several fish species, the salt marsh harvest mouse and Suisun ornate shrew, the California clapper rail, Suisun song sparrow, and black rail, and several plant species. We recommend 3,000 to 4,000 acres of restoration occur during Stage 1.

Restoration should occur in two general areas: west and north of Montezuma Slough (to benefit clapper rails and harvest mice among other species), and in the northeast corner of the marsh (to benefit fish, harvest mice, and plants). Suggestions for specific priority restoration locations follow:

> High priority actions to benefit multiple species (Suisun thistle, soft bird's-beak, clapper rail, black rail, Suisun shrew, and others) include tidal restoration of diked wetlands in the vicinity of Potrero Hills, especially around Hill Slough, Cutoff Slough, upper Suisun Slough to Peytonia Slough, and north of Volanti Slough. Another high priority area is Morrow Island. Restoration of these areas may require acquisition, but many parcels are owned by CDFG. Island marsh parcels would be the easiest to restore because they would not require levee construction for new flood control. Levee construction or similar earthwork would be required in some areas where tidal restoration abuts uplands or infrastructure (such as railroad lines).

2. Some restoration in the North Bay is important to benefit species such as the San Pablo song sparrow and San Pablo California vole, in addition to many of the other salt marsh species listed above. We recommend approximately 1,000 acres of restoration occur in this area during Stage 1. High priority actions in San Pablo Bay are land acquisition and tidal restoration. Privately owned lands which are at risk of development, and which have extraordinarily high restoration potential, are among the highest priorities right now. Some of these are lands owned by the Port of Oakland near American Canyon (southeast Napa River) and also some private lands around American Canyon which are proposed for residential development. These represent opportunities (probably fleeting) to restore large blocks of tidal marsh without the need for large levee construction. Other critical acquisitions would be closer to Sears Point and southeastern Petaluma River baylands, which are being investigated for vineyard potential. If such potential exists, assessed land values will become exorbitant. Purchase of large blocks of contiguous properties would facilitate more cost-efficient tidal marsh restoration by eliminating or reducing requirements for costly levee construction to isolate adjacent tidal and non-tidal (ag) parcels.

Pilot Project/Research Opportunities:

1. A high priority issue for Suisun Marsh is determining the effect of salinity management regimes of the Suisun Marsh Salinity Control Gate on Montezuma Slough. Originally designed to compensate for the detrimental effects of reduced delta outflows caused by diversions, there is substantial concern that the gate operations under prevailing salinity standards may be contributing to subtle long-term conversion of tidal marsh vegetation to a wetter, fresher regime than would naturally occur with highly variable outflows. This may be adversely impacting a number of species, particularly the two endangered plants and the clapper rail. Experimental studies (particularly mesocosm studies of plant competition under variable salinities) are needed to address this issue.

2. Some Suisun Marsh plant species are in competition with exotic plant species; in particular, *Lepidium* is a problem. We recommend that habitat restoration be combined with an intensive

Lepidium eradication effort (possibly as a pilot project) and longer term focused research on control of *Lepidium* and other exotic plants, such as Tamarisk and Arrundo.

3. Pilot Projects should also be established to eradicate/control other exotic species, such as red fox and feral cats for clapper rail conservation.

Other Species and Actions

Delta Plants

Restoration of tidal action in the Delta will likely benefit some plant species, e.g., Mason's lilaeopsis, delta mudwort, and delta tule pea, among others. However, some habitat restoration may need to be accompanied by recreation restrictions, e.g., no boat zones, to provide adequate conditions for plants to thrive. Again, species specific requirements need further exploration. Pilot Projects/Research Opportunities:

1. As noted above, long-term control of exotic plant species in the Bay-Delta system is an important research topic and should be initiated early in the CALFED process.

2. We recommend developing a pilot program or research project aimed at learning more about propagation of many of the rare plants found in the delta.

Delta Green Ground Beetle/Solano Grass

Begin expansion of the current Jepson Prairie Preserve to provide opportunities for the expansion of these two species. Ultimately, not necessarily in Stage 1, a complete corridor connection between Jepson Prairie and northern Suisun Marsh could be established.